

ABSTRACT

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3 A high-speed optical data link includes a system
4 circuit board, a first ASIC coupled to convey electrical
5 information to and from up level data management circuits,
6 and a second ASIC electrically coupled to the first ASIC. A
7 fiber optic module mounted on the system circuit board
8 including a receiver, a transmitter and the second ASIC.
9 The receiver includes a photo-diode positioned to receive
10 optical signals, a trans-impedance amplifier electrically
11 coupled to the photo diode, and a post-amplifier
12 electrically coupled to the trans-impedance amplifier and to
13 the second ASIC. The transmitter includes a laser
14 positioned to convey optical signals to a remote optical
15 receiver and a laser driver electrically coupled to the
16 laser and to the second ASIC. Both the first and the second
17 ASICs include clocking and equalization/retiming functions
18 for recovering distorted data transmitted therebetween
19 through electrical traces on the system circuit board so as
20 to send electrical data at rates equal to or higher than 10-
21 Gbps.